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ABSTRACT

This paper reports the effectiveness of seven different programs at Corning Community College (New York) designed to influence those factors associated with student attrition--low self concept of ability, high debilitating anxiety, low internal reinforcement control, and lack of goal and value clarity. The underlying theme of each of the programs has been to help students understand that the college faculty and administration are genuinely interested in the personal as well as academic growth of the student and know that incoming students may not have clear values or goals, and that it is natural for students to be apprehensive about things they are not familiar with. The programs include weekly "rap" sessions for Economic Opportunity Program students, a short-course in achievement motivation training, locus of control counseling, an Early Orientation Program for students with undecided educational goals, training in affective/confluent education principles for technical career faculty, an in-service faculty program to facilitate student-centered classrooms, group counseling for high anxiety nursing students, and encounter groups to improve student self-concept. Evaluation data for program participants and controls show that these efforts in improving student performance and reducing attrition have been more effective than purely "remedial" programs in academic areas. (JDS)

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Student Attrition and Program Effectiveness

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An institution of higher education cannot be "all things to all students". Thus, if a student decides after carefully considering the important factors that he wants to continue his education elsewhere, join the armed forces, enter the job world, or leave the college without graduating in order to pursue other goals, he does not belong in the category of "drop-outs" with which I am concerned. As a matter of fact, if the college had helped the student to consider the relevant factors in his life or education plans, even though his final decision means that he is going to withdraw from the college, I feel that the institution has been successful and has met its moral obligation to that student. The student that I am concerned about is the one who withdraws from college without definite plans, either because he sees no value in education, because of academic failure, because the whole learning environment has become too threatening to him, or because of other similar reasons.

To analyze the reasons for student attrition in more detail would, of course, be very important. However, to do so now would be beyond the scope of my presentation. Thus, I shall report only conclusions of those aspects of my research which will be necessary to understand and evaluate our program effectiveness. No attempts are made in this presentation to review the relevant research literature. Those familiar

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with the literature will find that our findings are in general accord with other studies.

Consistent repeated observations over the past five years show that at our college student attrition is related to low self-concept of academic ability, high debilitating anxiety, low internal reinforcement control, and lack of goal and value clarity. In some instances variables, such as debilitating anxiety, have even continued to increase while in college for students who eventually withdraw. College aptitude (SAT or ACT scores) have not been as effective predictors of attrition.

My over-simplified interpretation of our findings is that many of our potential drop-outs are personally not prepared for further formal education; they are uncertain about themselves, they see themselves as chess pieces being moved around by outside forces which they do not understand. Consequently, the underlying theme in our attrition programs has been to help our students understand that our faculty members and administrators are human beings, many of whom are genuinely interested in the student as a person; they are here to help the student grow personally as well as academically, they know, understand, and accept the fact that incoming students may not have a clear idea about their own values, goals, or roles, and that it is natural to be apprehensive about the things that one is not familiar with.

All of our successful programs have included aspects of the stated underlying theme. Our purely "remedial" programs have not been as successful. Our programs are in various stages of completion. I hope that even the ones on which I cannot report results at this time will be of interest to you.

1. Effects of weekly "rap" sessions on a group of Economic Opportunity Program students. During their second year, seventeen of thirty-five students were invited to weekly free discussions over a two-semester period. In addition, the director of the program had at least one brief meeting a week with each member of the experimental group. The other eighteen students served as a control group. Significant differences in favor of the experimental group ($p < .05$) were present at the end of the year on attrition, graduation, and grade-point-average (Reimanis, 1970a).

2. Achievement Motivation training (Reimanis, 1971). Since the summer of 1969 our college has offered achievement motivation training, patterned after Alschuler's work (Alschuler, 1970). The main purpose of the course at our college has been to help the students adjust to college life, to provide them with skills in self-exploration that facilitate their career planning, and to increase the students' motivation in pursuit of their goals. The course exposed the students to personal interaction with their peers and provided them with opportunities to learn and explore various achievement strategies and thoughts. Since debilitating anxiety (Haber & Alpert, 1966) (fear of failure) has been a predictor of attrition in our students, lately the course has been changed somewhat to focus also on reducing debilitating and increasing facilitating anxiety (hope for success). During the intitial achievement motivation sessions control groups were established by inviting only randomly selected high-risk students and regular students to participate in the program. After 1969 the course has been open to any interested student. The students received three hours of credit for about fifty hours of participation in the course. The course was usually conducted over a four-to-five day period, or over two long week-ends.

Results on academic variables: short term. For regular students there were no significant differences between the achievement motivation group (N = 143) and their controls (N = 962) on attrition during the first two semesters. For the high-risk students, there was a trend, significant at the .10 level, for the achievement motivation group (N = 214) to show less attrition than the control group (N = 44) during the second semester.

Grade-point-averages increased significantly more ($p < .05$) for all achievement motivation groups during the second semester following the course as compared to the control groups.

Results on academic variables: long term (Reimanis, 1973a). A sample of 172 students who underwent achievement motivation training either during 1969, 1970 or 1971, and a control group of 161 students were identified for a longitudinal follow-up. The students were selected from random pools and were matched on age, sex, aptitude, and program of study. The results in terms of the students' status at the time of graduating or leaving the institution showed significant ($p < .05$) differences on grade-point-average, the number of students who transferred to four-year institutions, and on the number of students who either graduated or transferred to a four-year institution versus leaving without continuing education. The differences were in favor of the achievement motivation group. The largest difference in the drop-out rate between the two groups was right after the second semester of their stay at Corning. Twice as many students left the college from the control group as compared to the achievement motivation group at that time. The data further suggested that, while significantly more students from the control group dropped out during the early semesters, twice as many students from the achievement motivation group remained at the college for a fifth semester as compared to the control group. It is

likely that the academically less prepared students in the control group dropped out of college, while the ones in the achievement motivation group persisted one more semester in order to transfer a graduate.

Results on personality variables. In this section I am including results on those student personality variables that are related to attrition or academic progress.

Following achievement motivation training there has been a consistent and lasting increase in internal locus of control. That is, an increase in the student's feeling that he himself is responsible for what happens to him, that he feels in control of his fate. Rotter's IE scale has been used to measure this concept (Rotter, 1966). By "lasting" is meant that the increase was still present in male students six months following the training. For female students the increase dissipated after about three months. A control group showed no significant changes on this variable. Internal reinforcement control has been related to attrition at our college.

Following achievement motivation training there has been an increase in students' self concept of academic ability (Biggs, 1970). This variable is highly related to attrition and grade-point- average. When this concept was assessed in students several months after achievement motivation training, there was no difference between the experimental and control groups.

Following achievement motivation training students increased in psychosocial maturity. The measure is based on Erikson's concept of developmental stages and has been shown to successfully assess maturity levels in four-year college students by Constantinople (1969). Significant increases were present in sense of trust, autonomy, industry, identity, and intimacy.

Following achievement motivation training students increased significantly in achievement motivation as measured by the Mehrabian (1968) scale. Achievement motivation as measured by this index has been shown to have positive relationships to grades and educational aspirations (Reid & Coher., 1973).

Achievement motivation training has not had a significant effect on debilitating or facilitating anxiety. This variable predicts attrition at our college. At the present we are making attempts to include procedures in the achievement motivation courses that may affect this variable.

3. Locus of control counseling. Specially designed group and individual counseling procedures have resulted in significant increase in internal reinforcement control in our students (Reimanis, 1970b).

4. Early Orientation program. During April, May, and June, last year, a pilot program was conducted with randomly selected eighteen students who listed their educational goals as undecided. A group of twenty-seven similar students were assigned to the control group. The experimental group students met, while still in high school, on the college campus for three half-day sessions. During these sessions, conducted by their advisor, they met various faculty members, received information about the college, and participated in activities designed to facilitate development of value clarity, trust, openness, and a friendly non-threatening atmosphere.

Significantly more students from the experimental group actually enrolled at the college and were still attending during the present semester as compared to the control group. There was also a non-significant trend for a decrease in debilitating anxiety and an increase in facilitating anxiety for the experimental group as compared with the control subjects (Reimanis, 1972a).

At the present a similar project is underway involving about six hundred prospective freshmen and about forty-five faculty members. The success or failure of this program I shall be able to report to you next year.

5. Affective or confluent education in technical career areas. A year ago all of our faculty members from the technical career areas, such as mechanical, electrical technologies, participated in a workshop on application of confluent education principles in the classroom. As a follow-through the participants continued to meet weekly to discuss successes and failures in applying these principles in classrooms. The results showed higher grades and lower transfer out of technical programs by the end of the year as compared to the previous two years (Gifford, , 1972; Reimanis, 1973b).

6. In-service training program. Last semester I completed a study on the interaction between student characteristics, teacher characteristics, teaching styles, and educational outcomes in fifty-three classes (Reimanis, 1972b). Educational outcomes were measured in terms of attitude and interest change, grades, teacher and course evaluation. The most important findings were that signifcantly higher positive outcomes including fewer withdrawals from course, were realized in classes where the instructor used more student direction in designing the course structure and in deciding on modes of learning, in classes that had more structure in terms of known rules and regulations and criteria for achievement evaluation, and where the instructor had the attitude that the student as a person is most important as contrasted to the importance of the subject matter to be covered. Since student interest and attitudes relate to attrition,

and since less course withdrawals were associated with the above characteristics, I feel this area is relevant in considering student attrition programs.

The in-service training program was designed to facilitate skills for increasing student feelings of involvement in course decisions, increasing structure of course, decreasing debilitating anxiety, and increasing faculty attitudes and skills concerning the importance of the student as a person.

The outcomes for the program participants, including student withdrawals from classes will be compared at the end of the semester to a control group of twelve teachers.

6. Following the findings that debilitating anxiety could be used quite effectively in predicting failure in nursing students, the nursing division at this college is presently working on a design of group counseling with high debilitating anxiety students.

7. An experiment is presently underway at this college, conducted by Gilbert Sweet as a doctoral thesis at the University of Rochester, to improve student personal as well as academic self-concepts, and to increase student retention. In this study encounter taped presentations (1968) are used in weekly sessions that are part of a required Health Education course. Random selection was used of students to participate in the encounter tape sessions. The purpose of the tapes was to create self-directed groups with the goal for each participant to believe in the reality of his potential as an effective human being. One of the assumptions was that self-concept growth is facilitated more in self-directed groups than leader groups. One of the main measures of success is attrition.

Conclusions

On basis of our data, I am convinced that attrition can be dealt with meaningfully by recognizing the fact that college education is more than mere acquisition of knowledge and skill in academic or technical areas. We expect the student upon graduation to show more maturity and better judgement than before in making decisions; we expect them to become useful citizens, people whom we can hold responsible for the future fate of the world.

For my purposes, Arthur Chickering (1969) has categorized the kind of psychosocial development that our programs have focused on in the following seven areas: Development of skills and confidence in:1) Achievement competence in a) intellectual, b) physical and manual, and c) social and interpersonal areas; 2) Managing emotions; 3) Becoming autonomous; 4) Establishing identity; 5) Freeing interpersonal relationships; 6) Clarifying purposes; and 7) Developing integrity. The significant aspect of Chickering's work is the recognition that developing academic competence is only one of many very important student growth processes with which an institution of higher learning should be concerned.

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